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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,295	03/12/2004	Thomas P. Yang	Y035 0001	6454
720 7590 06/19/2007 OYEN, WIGGS, GREEN & MUTALA LLP 480 - THE STATION 601 WEST CORDOVA STREET VANCOUVER, BC V6B 1G1 CANADA			EXAMINER WU, IVES J	
			ART UNIT 1724	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/798,295

Applicant(s)

YANG, THOMAS P.

Examiner

Ives Wu

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 13-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

- (1). Applicant's Amendments and Remarks filed on 05/10/2007 have been received. Claims 1 and 17 are amended. Claims 12 and 19 are cancelled. The rejection of claim 1 and 19 are revised in response to the Amendments of 05/10/2007, and presented with the rejections for rest claims herein below.

#### *Claim Rejections - 35 USC § 102/ 103*

- (2). The text of those Section Title 35 U. S. Code not included in this Office Action can be found in the prior Office Action dated January 6, 2006.
- (3). **Claims 1-7, 10-11 and 13-18** are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Anderson et al (US005096975A).

Anderson et al disclose a coating composition containing at least a copolymer of a vinylbenzene sulfonic acid - **claim 7**, and an ethylenically unsaturated monomer (Abstract, line 1-4) - **claim 1**. The water soluble conductive addition polymers having functionally attached hydroxyl groups, any suitable ammonium or alkali metal salt, for examples, sodium styrene sulfonate - **claims 2, 10, 18**, vinyl toluene sulfonic acid etc (Col. 2, line 50-66). When the binder polymer is to be employed in the preparation of the conductive polymers, any suitable hydroxyl containing solution or latex polymer may be employed such as for example, polyvinyl alcohol. It is further preferred that the binder polymer be employed in an amount of from about 20 to about 50 wt% - **(the balance) claims 3-5**, of the coating composition to achieve abrasion resistance and permanency of antistatic properties (Col. 3, line 30-34, 41-45). Illustrated in the Example 5, the surfactants used to be calculated as 0.8% (Col. 5, line 11-12) - **claims 13-15**.

As to the film in **independent claim 1**, it is well known that coating on substrate forming a film.

As to the film having a selected water-solubility rate in **independent claim 1**, in view of the substantially identical composition of water soluble film disclosed by Anderson et al and by applicant, it is examiner's position to believe that the composition of Anderson et al would inherently possess the properties of a selected water-soluble rate as claimed. Since USPTO does

not have proper means to conduct the experiments, the burden now is shifted to applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980).

As to the sulfonate polymer having a number average molecular weight in the range of 18,000 to 26,000, polyvinyl alcohol having a number average molecular weight in the range of 7,000 to 13,000 in **independent claim 1**, in view of the substantially identical composition of sulfonate polymer and polyvinyl alcohol disclosed by Anderson et al and by applicant, it is examiner's position to believe that sulfonate polymer, polyvinyl alcohol of Anderson et al would inherently possess the range number average molecular weight as claimed. Since USPTO does not have proper means to conduct the experiments, the burden now is shifted to applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594 (CCPA 1980).

As to the free-radical polymerization method in the **claim 6**, Anderson et al disclose the 0.1 gm of sodium persulfate in the Example 1, which is free radical generator for free-radical polymerization (Col. 4, line 56-68). As further evidenced by Duan et al (US005807919A): Col. 5, line 52-65.

As to the limitation of **claim 11**, the use of styrene sulfonic acid monomer taught by Anderson will form a sulfonated polystyrene polymer as further evidenced by Dehm et al (US004618655), Col 4, line 58-62.

As to limitation of **claims 13-15**, Anderson et al disclose surfactant maybe added to facilitate solution or dispersion or as a coating aids. Suitable surfactants include sodium lauryl sulfonate, dicotyl sodium sulfosuccinate, and the like (Col. 3, line 66 – Col. 4, line 2). Wetting agent as claimed is one of the surface active agent (page 1111-1112, Hawley's Condensed Chemical Dictionary, 11<sup>th</sup> Ed).

As to the container made from film in the **claim 16**, the disclosure of Anderson et al meets the requirements of the present claim 16 in terms of the types of materials. It is reasonable to presume that the water soluble film of Anderson et al would make a container as presently claimed in light of its chemical similarities. The burden is shifted to applicants to establish that the container of the present claims is not the same as or obvious as that set forth by Anderson et al.

As to limitation of **claim 17**, the disclosure of Anderson et al is incorporated herein by reference, the most subject matters of water-soluble film composition, number average molecular

weight, film having selected water-solubility rate, blend of polyvinyl alcohol and a water-soluble sulfonate polymer have been recited in applicant's claim 1 and have been discussed therein.

As sulfonate polymer in blend in a selected weight% of blend in **independent claim 17**, the word "selected" is not limiting unless the wt% is disclosed to specify. It would be obvious to have "selected" wt% in the blend to achieve applicant's invention.

As sulfonate polymer in blend in a selected weight% of blend, selected water-solubility rate being dependent on said selected wt% of sulfonate polymer in **independent claim 17**, in view of substantially identical sulfonate polymer disclosed by Anderson et al, and by applicant, it is the examiner's position to believe that the polymer film of Anderson et al would inherently possess the property of selected water-solubility rate being dependent on selected wt% of sulfonate polymer as claimed. Since USPTO does not have proper means to measure the solubility rate in respect to the selected weight% of sulfonate polymer, the burden now is shifted to applicant's to prove otherwise. *In re Fitzgerald* 205 USPQ 594 (CCPA 1980).

#### ***Claim Rejections - 35 USC § 103***

- (4). The text of those Section Title 35 U. S. Code not included in this Office Action can be found in the prior Office Action dated January 6, 2006.
- (5). **Claims 8, 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al (US005096975A) in view of Misumi et al (US003833457) and Beaulieu (US003677979) for the same rationale recited in the prior Office Action dated June 7, 2006.
- (6). **Claims 1-11, 13-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kochvar et al (US20020161088A1) in view of Misumi et al (US003833457) and Anderson et al (US005096975A), Joseph et al (US003677979).
- (7). Kochvar et al (US20020161088A1) disclose a rapidly dissolvable polymer films. (Title). The film-forming composition for use in preparing water-soluble films that are rapidly dissolving under cold water conditions, the composition comprising a water soluble polymer material such as polyvinyl alcohol and a principle solvent (Abstract, line 1-5). In addition, blends of different types of polymer materials can also be formulated and prepared to produce the films. For instance, ratio of 80/20, 60/40 and 50/50 with polyvinyl alcohol can be used to advantage ([0030]). Particularly preferred film-forming polymers are polyvinyl alcohol. Further, polyvinyl

Art Unit: 1724

alcohols having varying average molecular weights such as from 6,000 to about 78,000 or higher may be used ([0026], line 1-2,7-10).

(8). As to the blend with sulfonate polymer in **independent claim 1**, Kochvar et al **do not teach** the blend with a sulfonate polymer.

However, Anderson et al **teach** a polymer which is a copolymer of a vinylbenzene sulfonic acid and an ethylenically unsaturated monomer containing at least one primary hydroxyl group (Abstract, line 3-6). A binder polymer such as polyvinyl alcohol is employed in preparation of patentee's polymers (Col.3, line 30-34). Misumi et al also **teach** the use of sulfonate polymers for the coating composition (Col. 4,line 32 – Col. 5, line 32).

The advantages of using sulfonate polymer is to improve overall properties of the product not temporary but durable such as excellent water absorption, anti-electrostatic (Misumi et al - US003833457, Abstract, line 9-14; Anderson et al – US005096975A, Col. 1, line 42-68).

Therefore, it would have been obvious at time the invention was made to blend the water soluble film-forming polyvinyl alcohol polymer of Kochvar et al with sulfonate polymer of Anderson et al or Misumi et al in order to obtain the aforementioned advantages. Also, the sulfonate polymer such as polystyrene sulfonic acid is well known as a film forming (used in the art of membrane), water soluble polymer evidenced by Joseph et al (US004196001- Col. 3, line 50-53, line 61-62), therefore, the sulfonate polymer is compatible with polyvinyl alcohol in terms of the properties of water soluble, film-forming, motivated by a reasonable expectation of success. *In re O'Farrell*, 853 F.2d 894, 903, 7 USPQ2d 1673, 1681 (Fed. Cir. 1988).

As to the film having a selected water-solubility rate in **independent claim 1**, in view of substantially identical composition of water soluble film disclosed by prior art references, and by applicant, it is examiner's position to believe that the composition of water soluble film disclosed by prior art references would inherently possess the properties of a selected water-soluble rate as claimed. Since USPTO does not have proper means to conduct the experiments, the burden now is shifted to applicant to prove otherwise. *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977).

As to the sulfonate polymer having a number average molecular weight in the range of 18,000 to 26,000 in **independent claim 1**, in view of substantially identical sulfonate polymer disclosed by prior art reference, and by applicant, it is examiner's position to believe that

Art Unit: 1724

sulfonate polymer disclosed by prior art references would inherently possess range of number average molecular weight as claimed. Since USPTO does not have proper means to conduct the experiments, the burden now is shifted to applicant to prove otherwise. *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977).

As to limitation of **claim 17**, the disclosure of Kochvar et al, Anderson et al, Misumi et al and Joseph et al is incorporated herein by reference, the most subject matters of water-soluble film composition, number average molecular weight, film having selected water-solubility rate, blend of polyvinyl alcohol and a water-soluble sulfonate polymer have been recited in applicant's claim 1 and have been discussed therein.

As sulfonate polymer in blend in a selected wt% of blend in **independent claim 17**, the word "selected" is not limiting unless the wt% is disclosed to specify. It would be obvious to have "selected" wt% in the blend to achieve applicant's invention.

As sulfonate polymer in blend in a selected wt% of blend, selected water-solubility rate being dependent on said selected wt% of sulfonate polymer in **independent claim 17**, in view of substantially identical polymer film disclosed by prior art references, and by applicant, it is the examiner's position to believe that the polymer film of prior art references would inherently possess the property of selected water-solubility rate being dependent on selected wt% of sulfonate polymer. Since USPTO does not have proper means to measure the solubility rate in respect to the selected weight% of sulfonate polymer, the burden now is shifted to applicant's to prove otherwise. *In re Best* 562 F.2d 1252, 195 USPQ 430 (CCPA 1977).

The same rationale of rejections for **claims 2-11, 13-16 and 18** are recited in prior Office Action dated June 7, 2006.

### ***Response to Arguments***

Applicant's arguments filed on 05/10/2007 have been fully considered but they are not persuasive.

Applicant is suggested to provide unexpected results for the narrow range of number average molecular weight of polyvinyl alcohol and sulfonate polymer by using the closest prior art to run consecutive back-to-back test, in order to overcome the rejection based on the rationale of inherency.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ives Wu whose telephone number is 571-272-4245. The examiner can normally be reached on 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Examiner: Ives Wu  
Art Unit: 1724  
Date: June 16, 2007

DUANE SMITH  
PRIMARY EXAMINER

*D-*  
6-18-07